



UNIVERSITÀ  
DEGLI STUDI  
FIRENZE

# FLORE

## Repository istituzionale dell'Università degli Studi di Firenze

### **Food habits. Changes among young Italians in the last 10 years**

Questa è la Versione finale referata (Post print/Accepted manuscript) della seguente pubblicazione:

*Original Citation:*

Food habits. Changes among young Italians in the last 10 years / Casini L.; Contini C.; Marone E.; Romano C.. - In: APPETITE. - ISSN 0195-6663. - ELETTRONICO. - 68:(2013), pp. 21-29. [10.1016/j.appet.2013.04.009]

*Availability:*

This version is available at: 2158/801872 since:

*Published version:*

DOI: 10.1016/j.appet.2013.04.009

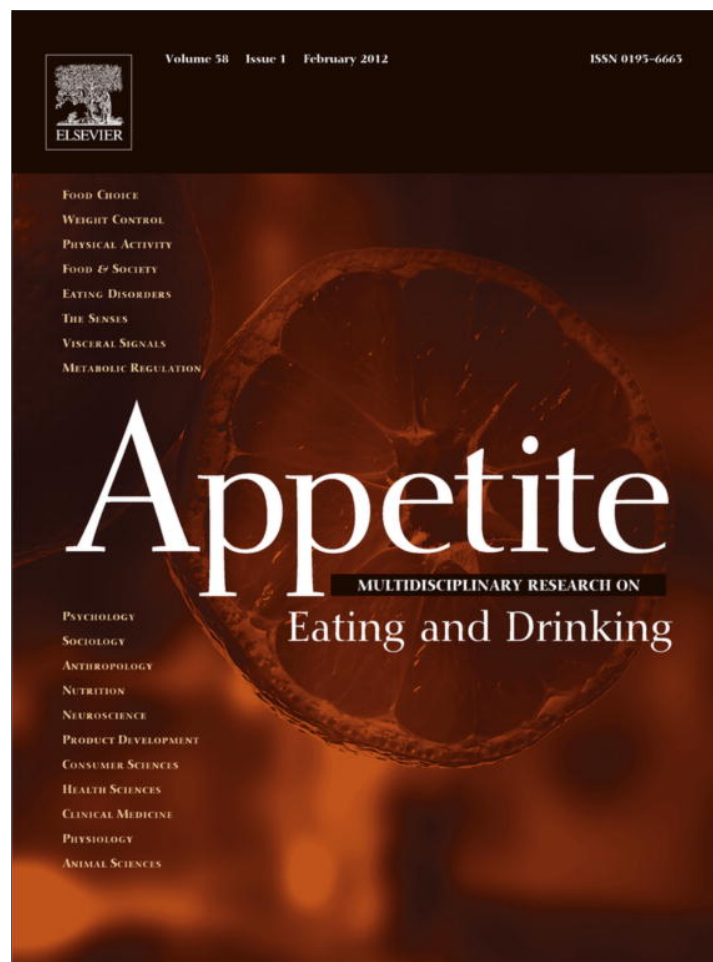
*Terms of use:*

Open Access

La pubblicazione è resa disponibile sotto le norme e i termini della licenza di deposito, secondo quanto stabilito dalla Policy per l'accesso aperto dell'Università degli Studi di Firenze (<https://www.sba.unifi.it/upload/policy-oa-2016-1.pdf>)

*Publisher copyright claim:*

(Article begins on next page)



This article appeared in a journal published by Elsevier. The attached copy is furnished to the author for internal non-commercial research and education use, including for instruction at the authors institution and sharing with colleagues.

Other uses, including reproduction and distribution, or selling or licensing copies, or posting to personal, institutional or third party websites are prohibited.

In most cases authors are permitted to post their version of the article (e.g. in Word or Tex form) to their personal website or institutional repository. Authors requiring further information regarding Elsevier's archiving and manuscript policies are encouraged to visit:

<http://www.elsevier.com/authorsrights>

Contents lists available at [SciVerse ScienceDirect](http://www.sciencedirect.com)

## Appetite

journal homepage: [www.elsevier.com/locate/appet](http://www.elsevier.com/locate/appet)

## Research report

## Food habits. Changes among young Italians in the last 10 years



Leonardo Casini, Caterina Contini\*, Enrico Marone, Caterina Romano

Dipartimento di Gestione dei Sistemi Agrari, Alimentari e Forestali, Università degli Studi di Firenze, P.le delle Cascine, 18, 50144 Firenze, Italy

## ARTICLE INFO

## Article history:

Received 31 July 2012

Received in revised form 15 March 2013

Accepted 10 April 2013

Available online 17 April 2013

## Keywords:

Food patterns

Generation X

Generation Y

Italy

Latent class clustering

Trends in food habits

## ABSTRACT

The study aims to identify future trends in food habits by comparing the food choices made in Italy by Generation X in the year 2000 with those of Generation Y in 2009. The analysis was conducted utilising the food expenditures surveyed by the National Statistics Institute on a representative sample of consumers. Segmentation was performed using the Latent Class Clustering in order to identify the principal food patterns and their evolution in the span of a decade. The results point out some trends of homologation in food consumptions that are potentially problematic from the viewpoint of the healthy aspects. An increase is noted among the so-called savers, characterised by a diet with a high energetic density, while a decline is noted among the young “traditionals” who stand out for their high consumptions of fruit, vegetables and fish. Out-of-the-home consumptions become established among singles, and there is an increase of easy to prepare and ready to eat products, especially among the young people with children of Northern Italy. These elements raise several issues with regard to social, economic and health implications. Public intervention becomes fundamental to provide information and stimulate markets in orienting producers and consumers towards virtuous models, compatible with the new demands of society.

© 2013 Elsevier Ltd. All rights reserved.

## Introduction

A careful analysis of contemporary society shows a radical evolution in consumer behaviours tied to a different way of living and of relating to others, introduced by the technological, economic and social transformations of these past years. Consumptions are thus evolving and assuming new significance in extremely heterogeneous areas, including that of food.

In this general picture, studying the behaviour of the young generations assumes a fundamental role. Indeed, the young generations express a considerable part of present consumptions as well as those of the future, as they are the category that will have the greatest purchasing power in coming years. Moreover, it must be emphasised here that young people show a greater responsiveness to change. This aspect induces us to identify them as possible precursors of trends that may even concern broader segments of society.

The bibliography on the food choices of young people has mainly addressed analysing the relationship between food habits and health (Chourdakis, Tzellos, Papazisis, Toulis, & Kouvelas, 2010; Fanning, Marsh, & Stiegert, 2010; Johansen, Rasmussen, & Madsen, 2006; McGinnis, Gootman, & Kraak, 2006). Other studies analyse the relationship between the food habits of young people and their lifestyles, especially in the passage from the family home to independent living (Beasley, Hackett, & Maxwell, 2004;

Papadaki, Hondros, Scott, & Kapsokefalou, 2007; Riddell, Ang, Keast, & Hunter, 2011; Satalic, Baric, & Keser, 2007).

These past years, a trend of study has developed around wine consumption behaviour that compares the attitudes of young people with those of older generations (Agnoli, Begalli, & Capitello, 2011; Charters et al., 2011; de Magistris, Groot, Gracia, & Albisu, 2011; Fountain & Lamb, 2011; Lorey & Poutet, 2011; Mueller, Remaud, & Chabin, 2011). On the other hand, if we move from the specific theme of wine, the studies that analyse the differences between different generations are limited and often part of marketing strategies non-specific to the food sector (Kueh & Voon, 2007; Marchini & Pieroni, 2009; Vazifehdust, Taghipourian, & Ahmadian, 2011).

It therefore appears extremely interesting to develop a specific study to fill the gap in literature about the evolution of the food choices of young people taken as a whole. Our paper is situated in this context, and proposes to examine the analogies and differences in food habits that have gained ground among the young people of two different generations. In particular, the hypothesis we want to test is whether, during the past 10 years, there have been significant changes in the food habits of young people and whether these changes are ascribable to the affirmation of new sociocultural models. This analysis has been conducted by comparing the food choices made by Generation X in the year 2000 with those of Generation Y in 2009. In particular, for both of these years, the study has concerned families with a head of the family aged 18–29, thereby focusing interest on young people who have formed autonomous family units and whose choices no longer

\* Corresponding author.

E-mail address: [caterina.contini@unifi.it](mailto:caterina.contini@unifi.it) (C. Contini).

directly depend on those of their parents. Following an initial analysis of the composition of food expenditure of the two generations, the study was further developed to verify the existence of different food patterns and their possible evolutions among the two generations.

#### *Socio-demographic determinants of food habits*

The food patterns have been interpreted in relation to the principal socio-demographic determinants of food purchasing. These include education, family overall expenditures (considered as a proxy of the income), geographic location, the family size and the presence of children. The choice of these variables has been based on the analysis of literature dealing with the relation between food habits and the socio-demographic variables.

In this ambit, education and income are widely recognised as valid predictors of consumers' eating behaviour. In particular, high levels of these variables are associated to greater consumptions of low fat foods, high fibre foods, fruit and vegetables. Furthermore, low incomes and low education levels are generally related to high energetic intake (Billson, Pryer, & Nichols, 1999; Giskes, Turrell, Patterson, & Newman, 2002; Groth, Fagt, & Brondsted, 2001; Ira-la-Estevez et al., 2000; Kirkpatrick & Tarasuk, 2003; Ricciuto, Tarasuk, & Yatchew, 2006; Trichopoulou, Naska, & Costacou, 2002). An explanation is that low income levels can limit health-conscious behaviour. On the other hand, a good level of education favours health-oriented attitudes, in terms of information acquisition behaviours, involvement with healthy foods, and of the importance attributed to natural and light foods (Chrysochou, Askegaard, Grunert, & Kristensen, 2010; Divine & Lepisto, 2005; Moorman & Matulich, 1993; Prasad, Strijnev, & Zhang, 2008).

On the other hand, a number of studies conducted in various countries have showed how the differences in food consumptions are also tied to territorial aspects. In Southern Europe, for example, there is a greater fondness for cuisine traditions than in Northern Europe. Other differences exist between rural areas and urban areas. In the latter, the diet proves higher in energy, in terms of fats and oils, higher in animal protein from meat and dairy foods and lower in fibre, vitamins and minerals (Bell & Valentine, 1997; Kearney, 2010; Nayga, 1997; Parrot, Wilson, & Murdoch, 2002). In Italy, the principal differences concern the country's geographical areas. These can be traced to different traditions, as well as to differences in lifestyles. In fact, while the diet of the South is more tied to traditional cuisine, in the North we note a greater destructuring of meals, which is reflected in a greater search for convenience foods (Cersosimo, 2011; Ismea, 2007).

Finally, literature points out how food habits are determined by family context. In particular the presence of children is interrelated to a greater consumption of fruit and vegetables, and a diet more in line with dietary guidelines. Being parents indeed involves a greater attention to diet, in the search for healthier products, as parents are aware that their food choices will influence the future state of health of their children (Gilbert, 2000; Mancino, Biing-Hwan, & Ballenger, 2004; Ricciuto et al., 2006).

## **Methods**

### *Sampling criteria*

The analysis was conducted utilising the data from the survey on the consumptions of Italian families conducted by the National Statistics Institute (Istituto Nazionale di Statistica, ISTAT). This survey concerns food and non-food expenditures effected in Italy. The population of reference is formed by all the resident families, intended as de facto families, that is to say groups of persons who co-

habit and are not necessarily joined by bonds of marriage or kinship.

Sampling is stratified in two stages, where the units of the first stage are represented by the communes, and the units of the second stage are the families. In the first stage, the Italian territory has been divided into 228 layers based on the type of commune, its demographic dimension and the region in which it is located. The second stage units are the families recruited by randomly selecting them from the registers of the sample commune. Surveying is carried out every month of the year, thereby making it possible to take into account the possible seasonal nature of several goods. It is conducted using two different data collection techniques:

- the family keeps a diary where every day they record all of their purchases for a period of 7 days;
- a final direct interview to complete the data acquired in the diary. It includes surveying the socio-demographic characteristics of the members of the family and the regular expenditures for the household.

For the years 2000 and 2009, the same survey modalities were utilised, including sampling, recruitment and the questionnaires.

For each family, ISTAT provides the average monthly consumptions, processed taking account of the period of the year in which the survey was conducted. Furthermore, it provides the sample's carry-over coefficients to the universe of Italian families. This processing makes it possible to reconstruct the average spending of Italian families with a relative error equal to 0.58%, given the probability  $p = 0.95$  (ISTAT, 2010).

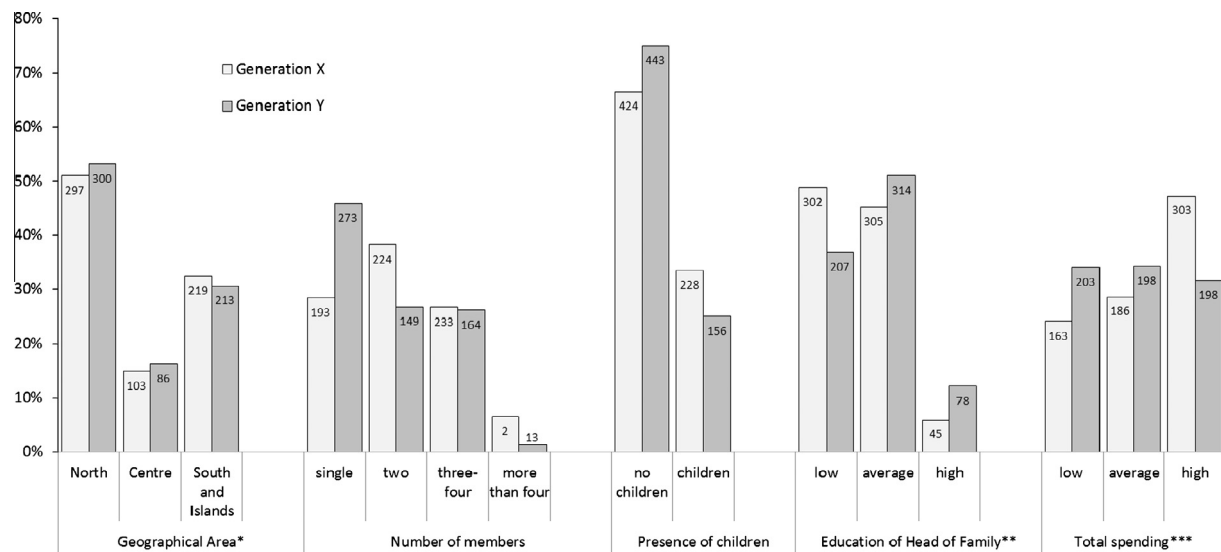
### *Data structure*

Our study has concerned the food consumptions of Italian families with a head of the family aged 18–29. In particular, in 2000, the family units interviewed in this age bracket numbered 652. They represent 753,776 families and food expenditures of € 428,397,259, which is about 4% of the expenditures made by all of the families that in 2000 lived in Italy. The families interviewed in 2009 numbered 599. They are representative of 814,732 Italian families and food expenditures of € 360,263,714, equal to about 3% of the Italian food expenditures.

### *Statistical analysis*

In the scope of our study, the presence of different consumption models within each of the two generations was investigated through the use of the latent class (LC) cluster analysis. This method was chosen for its rigorous statistical structure which outperforms the traditional cluster analysis (Goodman, 1974a, 1974b; Magidson & Vermunt, 2002; Vermunt & Magidson, 2002). This is a model-based method built on an underlying probability distribution to identify groups of cases that are similar with respect to a latent variable (Muthén & Muthén, 2000). The model's parameters are determined using the maximum likelihood method.

Choosing the number of classes to divide the sample into is effected by testing the extent to which the various statistical models fit increasing numbers of latent classes. The greater the number of classes, the better the model's fit. The optimal choice is represented by the model that has an adequate fit and the lesser number of classes possible (Clogg, 1995; Vermunt & Magidson, 2002). A variety of information criteria can be utilised to choose the number of classes; one of the most employed is the Bayesian Information Criteria (BIC). The lowest BIC value corresponds to the optimal number of classes (Alvarez & del Corral, 2010; Greene, 2005; Krish-



**Fig. 1.** Percentage makeup of Italian families with head of the family aged 18–29. Numbers indicate sample composition. \*33 families interviewed did not indicate the geographical area of residence. \*\*low (middle school certificate, elementary school certificate, no certificate), average (high school diploma), high (university degree and PhD). \*\*\*the thresholds were identified based on cumulative frequency distribution: low  $\leq q_{0.33}$ ,  $q_{0.33} < \text{average} \leq q_{0.66}$ , high  $> q_{0.66}$ .

nakumar & Chan-Halbrendt, 2010; Popper, Kroll, & Magidson, 2004; Scarpa, Thiene, & Tempesta, 2007; Schlecht & Spiller, 2012).

## Results

### Socio-demographic and food spending structure

The comparison between the socio-demographic structure of young families in the years 2000 and 2009 evidences the presence of several changes (Fig. 1). There was an increase in the number of singles, families without children, and the head of the family's education, while the number of more numerous families declined. We also note lesser total spending, an indication of a general impoverishment.

These changes are reflected on the food family spending that moves from € 528.81 in Generation X to € 477.95 in Generation Y. The analysis of food expenditure shows a high coefficient of variation (cv) for almost all of the 14 categories into which it was divided (bread and grains, white meat, red meat, cold cuts, fish, milk and yogurt, cheese and eggs, oils and fats, fruit and vegetables, easy to prepare and ready to use foods, sweets, alcoholic beverages, non-alcoholic beverages, out-of-home consumption). In fact, the cvs vary from a minimum of 0.62 for “bread and grains” to a maximum of 1.9 for the “easy to prepare and ready to use foods” in Generation X; similarly, in generation Y, they vary from 0.74 to 1.56 for the same items.

In addition to the differences in food choices, this variability also depends on the size of the family units and the amount of the expenditures. On the other hand, though excluding several elements of variability, the values expressed in percentages also show a high cv.

We have thus felt it necessary to examine these differences more closely, breaking down the sample into more homogeneous groups. Segmentation was performed utilising the LC cluster analysis. The analysis is implemented with the LC cluster analysis software Latent GOLD 4.5 which determined the parameters of the model<sup>1</sup> using the maximum-posterior method (Vermunt & Magidson, 2005a, 2005b, 2005c).

**Table 1**

Summary of latent class cluster models for Generation X.

Model	LL	BIC(LL)	AIC(LL)	AIC3(LL)	Class.Err.
1-Cluster model	−1065.2	20,389.6	20,210.4	20,250.4	0.00
2-Cluster model	−9811.4	19,953.4	19,724.9	19,775.9	0.02
3-Cluster model	−9775.3	19,952.3	19,672.0	19,734.0	0.05
4-Cluster model	−9738.3	19,949.7	19,622.7	19,695.7	0.07
5-Cluster model	−9699.2	19,942.8	19,566.5	19,650.5	0.09
6-Cluster model	−9673.2	19,961.9	19,551.5	19,646.5	0.10

Note: LL = Log-likelihood; BIC(LL) = Bayesian Information Criterion based on the log-likelihood; AIC(LL) = Akaike information criterion based on the log-likelihood; AIC3(LL) = Akaike information criterion, with 3 as penalising factor, based on the log-likelihood.

### Generation X

The choice of the best segmentation model was made by analysing the various information criteria resulting from applying the LC cluster analysis. For Generation X (aged 18–29), the 5-class model was chosen which presents the best structure of the criteria and, in particular, the lowest BIC (LL) (Table 1).

By applying the latent class to the 14 expenditure categories, 4 food categories were excluded (“easy to prepare and ready to use foods”, “alcoholic beverages”, “non-alcoholic beverages” and “sweets”), as these are not discriminant in defining food patterns.<sup>2</sup>

Based on the principal characteristics of the subjects belonging to each cluster and on their food choices, the five segments have been labelled as traditional, modern, out-of-home, convenience seekers and savers.

### Traditional young people

The “traditional” segment is the most numerous one. It represents 49% of the Italian families with a head of the family aged 18–29, and is responsible for expenditures equal to more than 50% of the expenditures of young families (same age bracket). It is formed by family units whose food consumptions generally take place in the home (93% of total food consumption). Their choices are spread over all of the categories, including fruit and vegetables,

<sup>1</sup> The 14 expenditure categories were recodified as categorical variables with values between 1 and 5, corresponding to their respective percentiles.

<sup>2</sup> Wald test,  $p < 0.01$  and  $R^2 > 0.1$ .



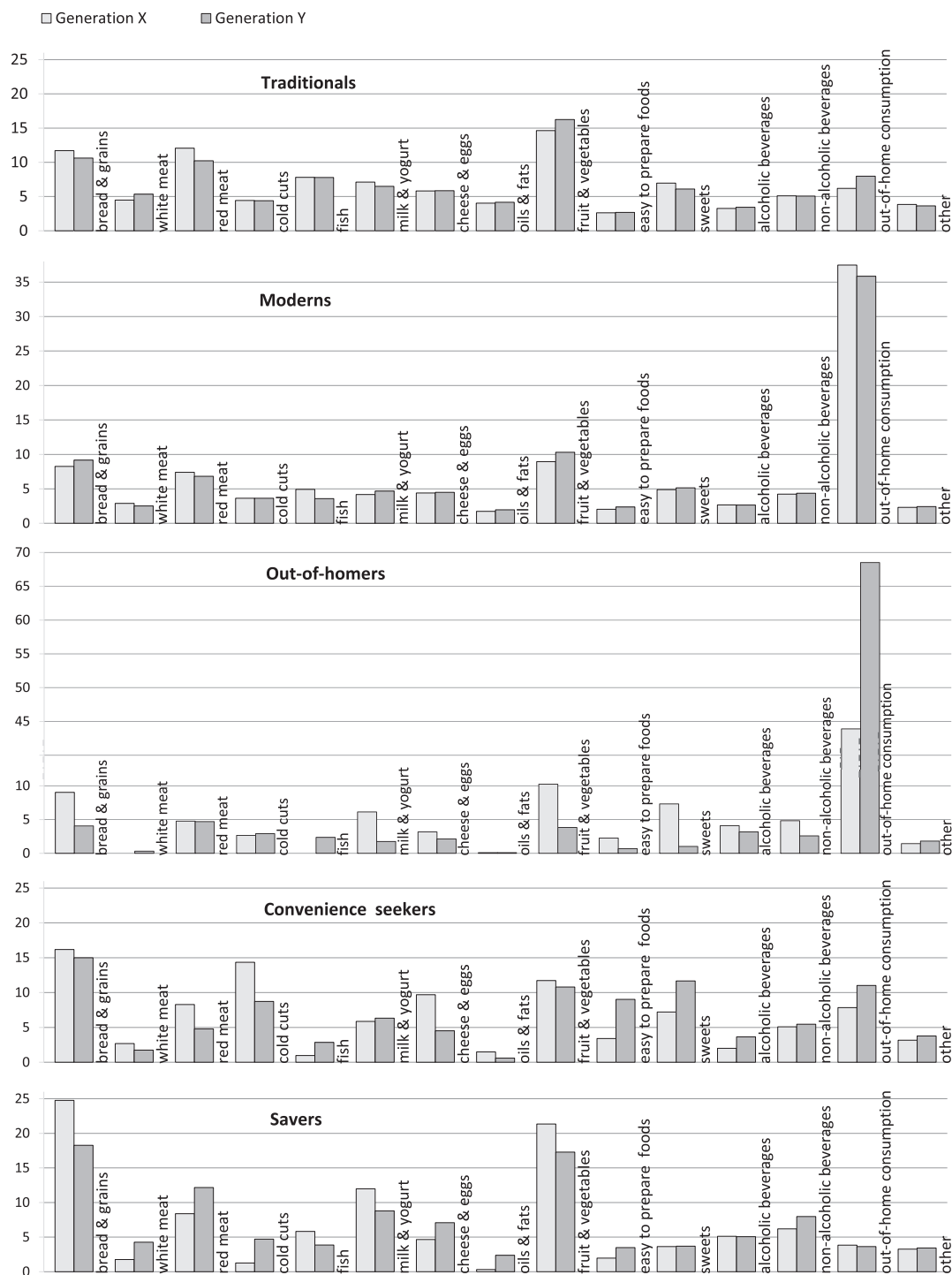


Fig. 2. Percentage makeup of food spending for the 5 food patterns of Generations X and Y.

meat, fish, bread, pasta and grains (Fig. 2 and Table 2). 45% of the “traditional” families have children, which is a high percentage if compared to the Italian average (33%). The families of this cluster are also the most numerous. In fact, those with more than five members represent 10% of the total, compared to the 6% of the Italian average. About half of these families (49%) live in the South and the Islands, compared to the Italian average of 32%. They are characterised by middle-low overall expenditures, an indication of a limited income level. In particular, the families with a middle-low spending represent more than 66% of the total of this cluster, which embraces about 71% of the Italian families with a low total

spending. Furthermore, the heads of families with a low level of education number 58% of the total.

#### Modern young people

The “modern” young people segment is formed by 29% of the young families, and presents food spending equal to 35%. The composition of spending for consumptions in the home is similar to that of the traditional families. In fact, the principal aspect that differentiates these families from those of the first cluster is the greater food consumptions out of the home (Fig. 2 and Table 2). On the

**Table 2**

Comparison of the real value of food spending (€/month per capita, year 2009) for the 5 food patterns of Generations X and Y.

Clusters Pillai's trace test	Traditionals <i>P</i> = 0.0484		Moderns <i>P</i> = 0.0438		Out-of-homers <i>P</i> < 0.0000		Convenience seekers <i>P</i> < 0.0000		Savers <i>P</i> = 0.0009	
	<i>Generations</i>									
	X	Y	X	Y	X	Y	X	Y	X	Y
Bread, pasta and grains	25.61	25.30	25.28	29.57	16.68	16.09	25.24	31.86	27.69	25.88
White meat	10.26	12.21	10.16	8.35	0.00	2.43	3.84	5.16	2.05	5.74
Red meat	28.55	25.35	25.97	24.62	10.22	19.70	16.74	12.28	10.54	20.08
Cold cuts	10.45	9.86	11.89	12.02	5.17	10.03	25.36	18.53	1.54	6.20
Fish	17.80	19.21	16.82	14.56	0.00	12.16	1.93	7.16	6.76	7.36
Milk and yogurt	16.51	16.03	13.94	14.88	10.21	7.83	10.55	12.72	14.14	13.15
Cheese and eggs	14.21	13.59	15.58	15.37	5.89	8.66	16.22	10.85	6.35	9.50
Oil and fats	8.95	9.53	5.74	7.25	0.17	0.28	2.63	1.83	0.47	3.70
Fruit and vegetables	33.37	38.89	29.35	34.47	19.42	17.62	19.29	22.75	27.69	23.31
Easy to prepare and ready to use foods	15.94	6.90	16.13	8.48	14.39	1.71	12.84	16.24	5.22	5.10
Sweets	7.32	15.08	7.27	16.65	4.90	3.43	5.83	22.80	2.97	5.27
Alcoholic beverages	8.10	8.55	7.31	7.76	2.08	5.90	5.45	7.94	5.04	5.98
Non-alcoholic beverages	7.99	8.52	9.38	9.04	8.86	16.23	4.29	6.61	1.89	4.48
Out-of-the-home consumption	16.71	21.06	121.28	116.49	101.75	275.52	16.20	25.23	2.76	0.86
Other	11.56	12.08	14.50	15.45	8.94	9.39	9.08	11.55	6.55	7.15
Total food spending	233.33	242.16	330.60	334.96	208.68	406.98	175.49	213.51	121.66	143.76

other hand, this cluster's socio-demographic characteristics are clearly different from those of the traditional families. Indeed, they are small units, without children, prevalently formed by one (36%) or two members (42%). 78% of the families of modern young people live in the Centre-North. Finally, families with high total spending represent 68% of the cluster, while those whose head of the family has a middle-high level of education total 61%.

#### Young out-of-home consumers

The segment of young “out-of-home” consumers (10% of the total of families) make food expenditures equal to 6% of the spending of young families. This cluster includes the family units with the highest incidence of out-of-the-home consumptions which account for almost 49% of overall food spending. On the other hand, the value of the other categories of foods consumed in the home is lower than in the other segments. This proves particularly evident for meat, fish and for oils and fats (Fig. 2 and Table 2). From the socio-demographic perspective, young consumers belonging to the “out-of-home” consumer pattern have a composition similar to that of the modern young people. The main difference concerns the fact that the young people of this cluster are mostly single (51.66%). Like the “modern” young people, the “out-of-homers”, too, present high total spending (the families with high spending levels are 58% of the cluster), and the head of the family has a medium-high level of education (families whose head of the family has a medium-high level of education are 79% of the cluster).

#### Young convenience seekers

The families belonging to the cluster of “convenience seekers” are 8% of the total, and express expenditures equal to 6% of that of the young families. They are characterised by a high consumption of cold cuts, cheeses and eggs, that is to say time-saving products that fit many occasions, and best respond to the need for fast and deconstructed meals (Fig. 2 and Table 2). From the socio-demographic perspective, the distinctive aspects of these families are geographical location (70% of them live in the North) and the presence of children. In particular, the families with children represent 40% of the cluster.

#### Young savers

The last and smallest cluster (4%) is formed by young “savers”. This cluster's food spending is low and represents 2% of the total.

These consumers are characterised by high expenditures for bread, pasta and grains, low expenditures for meat and cold cuts, and by low consumptions out of the home (Fig. 2 and Table 2). These families principally live in Central Italy (24% compared to the 16% of the population of Italy), and the main characteristic that distinguishes them from the other clusters is the low total spending (45% compared to the 34% of the population of Italy).

#### Generation Y

For Generation Y, the analysis of the various information criteria resulting from applying the LC cluster analysis has led us to select the 5-class model, coherent with the structure of the indicators tested (LL = −9573.5, BIC(LL) = 19,677.7, AIC(LL) = 17,920.9, AIC3(LL) = 18,004.9, Class.Err. = 0.14).

The LC cluster analysis parameters' output points out a first important difference in food habits between Generation X and Generation Y. In fact, in defining Generation Y food patterns, new categories enter the picture (“sweets” and “easy to prepare and ready to use foods”), while the “cheese and eggs” category is no longer a discriminant in defining the models. The non significant categories (“cheese and eggs”, “alcoholic beverages”, “non-alcoholic beverages”)<sup>3</sup> have been excluded from applying the latent class to Generation Y spending.

The structure of the five classes identified by the LC cluster analysis proves to correspond to that of Generation X, though with some differences in spending makeup and class consistence. Table 2 refers the results of the analysis of variance (Pillai's Trace test), which show significant differences between the five food patterns of the two generations. In particular, as far as spending is concerned, that of the “traditional” and “modern” young people shows minor variations in the passage from one generation to the other. Greater changes are recorded for the other three classes. For the “out-of-home” consumer category, the main change is an increase in consumptions at bars, cafeterias and restaurants. This increase determines an overall decrease in spending for consumptions in the home, especially for sweets and easy to prepare and ready to use products, which affect spending with values lower than 1%. White meat and fish instead follow an opposite trend and instead increase. The “convenience seekers” accentuate their characteristic of preferring foods with a high content of services that require less time to prepare, such as cold cuts, easy to prepare

<sup>3</sup> Wald test, *p* < 0.01 and *R*<sup>2</sup> > 0.

and ready to use foods and sweets. The “savers”, finally, cut expenditures for out-of-the-home consumptions and modify their spending for at-home consumptions, preferring meat, cold cuts, oil and fats (Fig. 2 and Table 2).

Major differences between the two generations concern the consistence of the five classes. A more than a one-quarter drop is recorded in the percentage of “traditional” families (from 49% to 36%), especially the more numerous families whose head of the family has a low level of education.

The percentage of the “out-of-homers” also declines, and concerns 6.5% of families. In this cluster, singles become the predominant family typology (77%) which sees the drastic reduction of families with children (6.5% of the total). Another aspect that characterises this group is high spending (the families with a high spending level are 69%), an indication of a good income level.

On the other hand, the weight of the “savers” increases considerably, passing from 4% to 20%. This consumption pattern gains ground mainly among the poorer, less educated and more numerous families. In fact, the families with a low level of spending represent 55% of this consumer typology, those whose head of the family has a low level of education, 49%, and those whose members number more than 4 represent 3%.

Finally, the importance of the “moderns” (30%) and of the “convenience seekers” (7%) remains similar, and so do their socio-demographic characteristics. It is interesting to underline how the “convenience seekers” of Generation Y mainly belong to families with intermediate characteristics, as far as spending levels and education level are concerned (the families with intermediate levels respectively represent 47% and 53% of the total).

These changes are followed by modifications in terms of food spending. In Generation Y, the spending of all the “traditional” families declines significantly (–11%), while that of the “savers” increases by the same percentage (+11%). On the other hand, we note an increase in the spending of the “convenience seekers” (+1%), and the same occurs for the “out-of-homers”. This rise can be explained by an increase in average spending. Finally, the spending of the young “moderns” decreases (–1%).

Finally, changes in food styles emerge on the territorial level. In the South and on the Islands, the “traditional” families decrease, while the other consumption typologies and, in particular, the “out-of-homers”, increase. Thus, while for generation X, the majority of the families of the South and the Islands belonged to the “traditional” families (72%), for generation Y, the “traditional” families in these areas drop to almost one half (45%). On the other hand, the “out-of-homers” in this territory move from 2% to 6.5%.

## Discussion

The analysis of food consumptions of young people in this past decade has shown the occurrence of significant changes. Several of these can be explained with economic factors, while others seem to clearly confirm the initial hypothesis that transformations in food habits originate in the spread of new sociocultural models.

The economic crisis has surely led to major changes in food behaviours, such as a reduction in spending, and a considerable increase in the number of “savers” families (from 4% to 20%). These families are characterised by low food spending made almost exclusively for foods consumed in the home, among which those with a high energetic density, such as bread, pasta and grains, stand out. The poorer, more numerous families with a low level of education assume this pattern, abandoning the so-called “traditional” consumer style which presents a more balanced dietary makeup, higher spending levels, and greater consumptions out of the home.

As for transformations tied to the cultural environment, the first phenomenon that emerged from our analysis is the increased

weight of consumptions in bars, restaurants and cafeterias among the so-called young “out-of-homers”. The rise in consumptions out of the home can be explained by faster paced living and different work demands, in addition to the search for convivial opportunities outside of the home. In fact, the distance from the place of work, shorter lunch breaks, and the greater importance attributed to recreational activities have brought about increased spending in bars, restaurants and cafeterias, despite the economic crisis. The “out-of-home” consumer pattern is typical of singles with a good income level and good level of education. Finally, we must underline that the consumer of this typology has seen his overall food spending increase (€ 407/month per capita), which bucks the trend of what has been verified on the national level.

Another pattern that has taken shape in these years is that of the “convenience seekers”. This cluster does not increase but instead confirms its dimensions and takes on more definite characteristics. This is the pattern not only of singles and couples without children, but also of young people with children. The success of ready-prepared foods that emerged in our study is in line with what has been observed in other countries where, nonetheless, differences do emerge. In fact, while in European countries meal preparation is still considered an important activity by a substantial part of society, in other countries, such as the United States, food preparation at home assumes increasingly more marginal traits, and ready-to-eat products concern broader segments of consumers (Carrigan, Szmigin, & Leek, 2006; Davies & Madran, 1997; de Boer, McCarthy, Cowan, & Ryan, 2004; Jabs & Devine, 2006). The greater weight of ready-prepared foods is the result of the success of new lifestyles and the food industry's prompt reaction to the consumers' needs. Concerning the aspects tied to the socio-cultural environment, the principal factors responsible for this pattern's increased success are the faster societal pace and women's participation in the world of work. These changes are accompanied by structural changes within the family that see the members eat alone, and distribute the meals throughout the day, consuming light meals (Mahon, Cowan, & McCarthy, 2006). In this regard, an analysis conducted in Italy (Romani, 2005) underlines how the increase in the use of easy to prepare and ready to use products is the result of a great change in family organisation. While indeed in the 1980s, the purchase and preparation of food was still principally the responsibility of women (Counihan & Kaplan, 1998), in the post-modern family, both parents attend to these tasks. Furthermore, we witness an increase in the meals eaten alone at home, at different times, and not only for reasons of work or school, but also due to recreational and after-school activities. On the other hand, parents prefer to devote their time free from work to activities tied to their children's interests (such as the cinema or sports), instead of cooking. Easy to prepare and ready to use foods are therefore consumed even when the family members eat together, as this type of product makes it possible to satisfy the different tastes of children and adults, with little effort.

As far as aspects tied to the market are concerned, the food industry has doubtlessly responded to people's need to dedicate less time to cooking, developing convenience foods. Consequently, the availability of these products on the market has considerably increased in these years, and today's “convenience seekers” find a broader range of time-saving products than the young people of Generation X could find (Gardyn, 2002; Gofton, 1995; Jekanowski, 1999; Stewart, Blisard, Bhuyan, & Nayga, 2004). Moreover, also the diffusion of microwave ovens and freezers has further changed food products and reduced people's need to plan ahead for meals (Oropesa, 1993).

The results of our analysis show that, despite the economic crisis, saving time in preparing food has become a priority for this niche of young families. This circumstance has contributed to



modifying the consumers' attitude towards products with a high content of services. In fact, increasingly more often, easy to prepare and ready to use foods are perceived as an optimal solution (Buckley, Cowana, & McCarthy, 2007). Consequently, easy to prepare and ready to use foods are no longer associated to the lack of care or attention to family life, and must possess characteristics of quality in terms of healthiness and nutritional balance.

On the territorial level, a homologation of food habits emerges, which is principally attributable to the increased similarity of lifestyles between Northern and Southern Italy (Rosina & Caltabiano, 2011). In fact, while in the past, the prevalent pattern in the South and Islands was the "traditional" pattern, today this consumption typology has been abandoned in favour of patterns that see a rise in consumptions out of the home and a preference for products with a high content of services.

The changes described here pose numerous questions from the viewpoint of nutrition-healthiness. The young "convenience seekers" prove to be the ones with the food habits further from those recommended by the Italian Ministry of Health, be it for their high consumption of bread, pasta and grains, cold cuts and sweets, be it for their limited consumptions of fruit and vegetables. These factors are joined by the frequent recourse to easy to prepare and ready to use products, which literature describes as being of a lower nutritional quality for the scarce presence of fibres, vitamins, minerals, phytonutrients and for the addition of sugar, fillers, preservatives, hydrogenate or saturated fats, sodium, artificial colours and flavours (Drewnowski & Darmon, 2005; Jabs & Devine, 2006; Nestle, 2002). These characteristics place the "convenience seekers" consumer group at risk of a nutritionally poor diet.

On the other hand, the group that presents the healthiest food behaviours is that of the young "traditionals" who stand out for their high consumptions of fruit, vegetables and fish. In this sense, the passage from this pattern to that of the "savers", which our analysis shed light on, draws attention to the implications that this phenomenon can have.

Consensus exists in literature as to the fact that a decline in living standard brings about a change in food choices. Numerous studies point out that people with a lower socioeconomic status perceive price as a barrier in purchasing foods with a good nutritional profile. This phenomenon can translate into a trend towards having an unhealthy diet (Drewnowski & Darmon, 2005; Harrison et al., 2007). On the other hand, other studies point out possible positive changes, such as the reduction in eating takeaway food or confectionery (Hunter & Worsley, 2009). Similar considerations also emerge from our study where "savers" are characterised not only by elevated consumptions of foods with high energetic contents, but also by low consumptions of convenience foods, including out of the home eating.

Finally, another group potentially at risk of an unhealthy diet is that of the young "out-of-homers". This is because the food consumed in bars, restaurants and cafeterias is generally higher in dietary fat, sodium and calories, and lower in fruits, vegetables, fibre and calcium (Neumark-Sztainer, Hannan, Story, Croll, & Perry, 2003; Videon & Manning, 2003). For these reasons, the young "out-of-homers" must be considered as more vulnerable than other groups for pathologies correlated to a poor diet from the nutritional viewpoint and with a high energy intake (Buscemi et al., 2011; Gillis & Bar-Or, 2003).

Overall, the analysis of the intergenerational dynamics we have conducted points out trends towards homologation in food consumptions that are potentially problematic from the viewpoint of the healthy aspects of the prevalent consumption patterns. These results reflect what emerges in other countries of the Mediterranean area where we witness the passage from a diet considered healthy to other less healthy food patterns (Gracia & Albisu, 1999). On the other hand, other studies in literature show that con-

sumers' trends are oriented towards "quality" foods, and that organic, sustainable and functional products can encounter greater success among the young people of today compared to those of the past (Kearney, 2010; Siró, Kápolna, Kápolna, & Lugasi, 2008; Willer & Kilcher L., 2011). These results are not in disagreement with the findings of our study; they instead reinforce their operative implications. Current lifestyles and even economic conditions turn young people towards incorrect forms of nourishment, despite the awareness of the risks and limits of these choices.

These orientations present new challenges and new possibilities for both private and public operators.

From the point of view of the managerial implications, we can underline the importance of marketing policies differentiated for specific segments of young people. A particularly challenging target is that of the "convenience seekers", who should be the focus of an offer of "fast" foods with a good quality/price ratio and adaptable to the various demands of consumption, both in terms of portion size and variety of tastes. The restaurant sector, too, merits particular and closer examination. There is indeed a bracket of young people for whom out-of-the-home consumptions have assumed an increasingly more important role. Hence the advisability to develop new products specifically oriented towards the restaurants market, also through conducting research aimed at more precisely characterising the demand.

From the public viewpoint, the food consumption models that are presently gaining ground forcefully pose the theme of the relationship between nutrition and health, drawing attention to the impact of new food habits on the national health system.

Considering that, in the next decades, today's Generation Y will prove to be the most important class of consumers, the theme of healthy policies enacted by the competent public authorities will become extremely important. The costs in terms of greater burdens for the national health systems can doubtlessly justify interventions aimed at informing and motivating the markets to invert negative food trends.

These interventions should include conducting nutrition education campaigns beginning in primary schools, and developing efficient forms of institutional communication on the health properties of foods and on preparation techniques. Furthermore, improvements could be made in the regulations on labelling and quality certifications, even on the restaurants level, so that the consumers will be able to make informed choices and select healthy food products with the confidence that they will deliver what they promise.

Considered on the whole, these actions could substantially contribute to correcting current dietary trends, and reorient consumption models towards more virtuous food patterns that are compatible with the new demands of society.

Our study represents a contribution of information in this direction. It is based on analysing the food spending of Italian families, and can present limits tied to extending the results to the consumptions of individual family members. The dynamics that emerged, however, appear very clear and significant. It would be particularly useful to probe further into this theme in order to provide more precise indications on the most appropriate interventions in health policies. In particular, it would appear useful to conduct analyses in greater detail on the shopping list items, and to make comparisons internationally in order to validate and integrate the conclusions proposed.

## Ethics

This paper presents the results of research that has not involved experimentation with humans, human tissues, genetic information or animals. Personal information was collected in anonymous

form. The Italian Law on the Protection of individuals and other subjects regarding the processing of personal data was complied with.

## References

- Agnoli, L., Begalli, D., & Capitello, R. (2011). Generation Y's perception of wine and consumption situations in a traditional wine-producing region. *International Journal of Wine Business Research*, 23(2), 176–192.
- Alvarez, A., & del Corral, J. (2010). Identifying different technologies using a latent class model. Extensive versus intensive dairy farms. *European Review of Agricultural Economics*, 37, 231–250.
- Beasley, L. J., Hackett, A. F., & Maxwell, S. M. (2004). The dietary and health behaviour of young people aged 18–25 years living independently or in the family home in Liverpool, UK. *International Journal of Consumer Studies*, 28(4), 355–363.
- Bell, D., & Valentine, G. (1997). *Consuming geographies. We are where we eat*. London: Routledge.
- Billson, H., Pryer, J., & Nichols, R. (1999). Variation in fruit and vegetable consumption among adults in Britain. An analysis from the dietary and nutritional survey of British adults. *European Journal of Clinical Nutrition*, 53, 946–952.
- Buckley, M., Cowana, C., & McCarthy, M. (2007). The convenience food market in Great Britain. Convenience foodlifestyle (CFL) segments. *Appetite*, 49(3), 600–617.
- Buscemi, S., Barile, A., Maniaci, V., Batsis, J. A., Mattina, A., & Verga, S. (2011). Characterization of street food consumption in Palermo. Possible effects on health. *Nutrition Journal*, 10, 1–9.
- Carrigan, M., Szmigin, I., & Leek, S. (2006). Managing routine food choices in UK families. The role of convenience consumption. *Appetite*, 47, 372–383.
- Cersosimo, D. (2011). I consumi alimentari, evoluzione strutturale, nuove tendenze, risposte alla crisi. Gruppo 2013. Ed. Tellus.
- Charters, S., Velikova, N., Ritchie, C., Fountain, J., Thach, L., Dodd, T. H., Fish, N., Herbst, F., & Terblanche, N. (2011). Generation Y and sparkling wines. A cross-cultural perspective. *International Journal of Wine Business Research*, 23(2), 161–175.
- Chourdakis, M., Tzello, T., Papazisis, G., Toulis, K., & Kouvelas, D. (2010). Eating habits, health attitudes and obesity indices among medical students in northern Greece. *Appetite*, 55(3), 722–725.
- Chrysochou, P., Askegaard, S., Grunert, K. G., & Kristensen, B. D. (2010). Social discourses of healthy eating. A market segmentation approach. *Appetite*, 55, 288–297.
- Clogg, C. C. (1995). Latent class models. In G. Arminger, C. C. Clogg, & M. E. Sobel (Eds.), *Handbook of statistical modeling for the social and behavioral sciences* (pp. 313–314). New York: Springer.
- Counihan, C. M., & Kaplan, S. L. (1998). *Food and gender. Identity and power*. Amsterdam: Harwood Acad.
- Davies, G., & Madran, C. (1997). Time, food shopping and food preparation. Some attitudinal linkages. *British Food Journal*, 99(3), 80–88.
- de Boer, M., McCarthy, M., Cowan, C., & Ryan, I. (2004). The influence of lifestyle characteristics and beliefs about convenience food on the demand for convenience foods in the Irish market. *Food Quality and Preference*, 15, 155–165.
- de Magistris, T., Groot, E., Gracia, A., & Albusu, L. M. (2011). Do Millennial generation's wine preferences of the "New World" differ from the "Old World"? A pilot study. *International Journal of Wine Business Research*, 23(2), 145–160.
- Divine, R. L., & Lepisto, L. (2005). Analysis of the healthy lifestyle consumer. *Journal of Consumer Marketing*, 22(5), 275–283.
- Drewnowski, A., & Darmon, N. (2005). Food choices and diet costs. An economic analysis. *Journal of Nutrition*, 135, 900–904.
- Fanning, J., Marsh, T., & Stiegert, K. (2010). Determinants of fast food consumption 1994–1998. *British Food Journal*, 112(1), 5–20.
- Fountain, J., & Lamb, C. (2011). Generation Y as young wine consumers in New Zealand. How do they differ from Generation X? *International Journal of Wine Business Research*, 23(2), 107–124.
- Gardyn, R. (2002). Convenience. *American Demographics*, 24(3), 30–33.
- Gilbert, L. (2000). The functional food trend. What's next and what Americans think about eggs. *Journal of the American College of Nutrition*, 19(5), 507–512.
- Gillis, L. J., & Bar-Or, O. (2003). Food away from home, sugar-sweetened drink consumption and juvenile obesity. *Journal of the American College of Nutrition*, 22, 539–545.
- Giskes, K., Turrell, G., Patterson, C., & Newman, B. (2002). Socioeconomic differences among Australian adults in consumption of fruit and vegetables and intakes of vitamins A, C and folate. *Journal of Human Nutrition and Dietetics*, 15, 375–385.
- Gofton, L. (1995). Convenience and the moral status of consumer practices. In D. W. Marshall (Ed.), *Food choice and the consumer*. London: Blackie Academic & Professional.
- Goodman, L. A. (1974a). The analysis of systems of qualitative variables when some of the variables are unobservable. Part 1. A modified latent structure approach. *American Journal of Sociology*, 79, 1179–1259.
- Goodman, L. A. (1974b). Exploratory latent structure analysis using both identifiable and unidentifiable models. *Biometrika*, 61, 215–231.
- Gracia, A., & Albusu, L. M. (1999). Moving away from a typical Mediterranean diet. The case of Spain. *British Food Journal*, 101(9), 701–714.
- Greene, W. (2005). Reconsidering heterogeneity in panel data estimators of the stochastic frontier model. *Journal of Econometrics*, 126, 269–303.
- Groth, M., Fagt, S., & Brondsted, L. (2001). Social determinants of dietary habits in Denmark. *European Journal of Clinical Nutrition*, 55, 959–966.
- Harrison, M. S., Coyne, T., Lee, A. J., Leonard, D., Lowson, S., Groos, A., & Ashton, B. A. (2007). The increasing cost of the basic foods required to promote health in Queensland. *Medical Journal of Australia*, 186(1), 9–14.
- Hunter, W. T., & Worsley, T. (2009). Understanding the older food consumer. Present day behaviours and future expectations. *Appetite*, 52, 147–154.
- Irala-Estevez, J., Groth, M., Johansson, L., Oltersdorf, U., Prattala, R., & Martinez-Gonzalez, M. (2000). A systematic review of socioeconomic differences in food habits in Europe. *European Journal of Clinical Nutrition*, 54, 706–714.
- ISMEA (2007). *Gli acquisti alimentari in Italia. tendenze recenti e nuovi profili di consumo*. ISMEA: Report Consumi. Roma.
- ISTAT (2010). *I consumi delle famiglie italiane*. <http://www.istat.it/it/>.
- Jabs, J., & Devine, C. M. (2006). Time scarcity and food choices. An overview. *Appetite*, 47, 196–204.
- Jekanowski, M. D. (1999). Causes and consequences of fast food sales growth. *Food Review*, 22(1), 11–16.
- Johansen, A., Rasmussen, S., & Madsen, M. (2006). Health behaviour among adolescents in Denmark. Influence of school class and individual risk factors. *Scandinavian Journal of Public Health*, 34(6), 32–40.
- Kearney, J. (2010). Review food consumption trends and drivers. *Philosophical Transactions of the Royal Society B Biological Sciences*, 365, 2793–2807.
- Kirkpatrick, S., & Tarasuk, V. (2003). The relationship between low income and household food expenditure patterns in Canada. *Public Health Nutrition*, 6, 589–597.
- Krishnakumar, J., & Chan-Halbrecht, C. (2010). Consumer preferences for imported Kona coffee in South India. A latent class analysis. *International Food and Agribusiness Management Review*, 13, 97–116.
- Kueh, K., & Voon, B. H. (2007). Culture and service quality expectations. Evidence from Generation Y consumers in Malaysia. *Managing Service Quality*, 17(6), 656–680.
- Lorey, T., & Poutet, P. (2011). The representations of wine in France from generation to generation. A dual generation gap. *International Journal of Entrepreneurship and Small Business*, 13(2), 162–180.
- Magidson, J., & Vermunt, J. K. (2002). Latent class models for clustering. A comparison with K-means. *Canadian Journal of Marketing Research*, 20, 37–44.
- Mahon, D., Cowan, C., & McCarthy, M. (2006). The role of attitudes, subjective norm, perceived control and habit in the consumption of ready meals and takeaways in Great Britain. *Food Quality and Preference*, 17(6), 474–481.
- Mancino, L., Bing-Hwan, L., & Ballenger, N. (2004). The role of economics in eating choices and weight outcomes. *Agriculture Information Bulletin no.791*. Washington, DC: Economic Research Service, USDA.
- Marchini, A., & Pieroni, L. (2009). *Dinamiche intergenerazionali nei modelli di consumo alimentare. il caso della dieta mediterranea in Italia*. Franco Angeli, Milano: XLIV Convegno Sidea.
- McGinnis, J. M., Gootman, J. A., & Kraak, V. I. (2006). *Food marketing to children and youth. Threat or opportunity?* Washington, DC: National Academies Press.
- Moorman, C., & Matulich, E. (1993). A model of consumers preventive health behaviors. The role of health motivation and health ability. *Journal of Consumer Research*, 20(2), 208–228.
- Mueller, S., Remaud, H., & Chabin, Y. (2011). How strong and generalisable is the Generation Y effect? A cross-cultural study for wine. *International Journal of Wine Business Research*, 23(2), 125–144.
- Muthén, B., & Muthén, L. K. (2000). Integrating person-centered and variable-centered analyses. Growth mixture modeling with latent trajectory classes. *Alcoholism. Clinical and Experimental Research*, 24, 882–891.
- Nayga, R. M. Jr., (1997). Impact of socio-demographic factors on perceived importance of nutrition in food shopping. *Journal of Consumer Affairs*, 31(1), 1–9.
- Nestle, M. (2002). *Food politics. How food industry influences nutrition and health*. Berkeley: University of California Press.
- Neumark-Sztainer, D., Hannan, P., Story, M., Croll, J., & Perry, C. (2003). Family meal patterns. Associations with sociodemographic characteristics and improved dietary intake among adolescents. *Journal of the American Dietetic Association*, 103(3), 317–322.
- Oropesa, R. S. (1993). Female labor force participation and time-saving household technology. A case study of the microwave from 1978 to 1989. *Journal of Consumer Research*, 19(4), 567–579.
- Papadaki, A., Hondros, G., Scott, J. A., & Kapsokafalou, M. (2007). Eating habits of university students living at, or away from home in Greece. *Appetite*, 49(1), 169–176.
- Parrot, N., Wilson, N., & Murdoch, J. (2002). Spatializing quality. Regional protection and the alternative geography of food. *European Urban and Regional Studies*, 9, 241–261.
- Popper, R., Kroll, J., & Magidson, J. (2004). Applications of latent class models to food product development. A case study. Sawtooth software proceedings. <http://www.statisticalinnovations.com/products/popper.pdf>.
- Prasad, A., Strijnev, A., & Zhang, Q. (2008). What can grocery basket data tell us about health consciousness? *International Journal of Research in Marketing*, 25(4), 301–309.
- Ricciuto, L., Tarasuk, V., & Yatchew, A. (2006). Socio-demographic influences on food purchasing among Canadian households. *European Journal of Clinical Nutrition*, 60, 778–790.

- Riddell, L. J., Ang, B., Keast, R. S. J., & Hunter, W. (2011). Impact of living arrangements and nationality on food habits and nutrient intakes in young adults. *Appetite*, 56(3), 726–731.
- Romani, S. (2005). Feeding post-modern families. Food preparation and consumption practices. In K. M. Ekstrom & H. Brembeck (Eds.), *New family structures, in European advances in consumer research* (pp. 250–254). Goteborg, Sweden: Association for Consumer Research.
- Rosina, A., & Caltabiano, M. (2011). Un secolo e mezzo di storia demografica italiana. le dinamiche del passato, i problemi del presente, la sfida del future. *Quaderni Svimez*, 31, 503–512.
- Satalic, Z., Baric, I. C., & Keser, I. (2007). Diet quality in Croatian university students. Energy, macronutrient and micronutrient intakes according to gender. *International Journal of Food Sciences and Nutrition*, 58(5), 398–410.
- Scarpa, R., Thiene, M., & Tempesta, T. (2007). Latent class count models of total visitation demand. Days out hiking in the Eastern Alps. *Environmental Resource Economics*, 38(4), 447–460.
- Schlecht, S., & Spiller, A. (2012). A latent class cluster analysis of farmers' attitudes towards contract design in the dairy industry. *Agribusiness*, 28(2), 121–134.
- Siró, I., Kápolna, E., Kápolna, B., & Lugasi, A. (2008). Functional food. Product development, marketing and consumer acceptance. A review. *Appetite*, 51(3), 456–467.
- Stewart, H., Blisard, N., Bhuyan, S., & Nayga, R. M. (2004). The demand for food away from home. Full-service or fast food? Agricultural Economic Report, 829. USDA. <<http://www.ers.usda.gov/publications/AER829/>>.
- Trichopoulou, A., Naska, A., & Costacou, T. (2002). Disparities in food habits across Europe. *Proceedings of the Nutrition Society*, 61, 553–558.
- Vazifehdust, H., Taghipourian, M. J., & Ahmadian, A. F. (2011). Y Generation, combination generation and perceptions differentials from brand components in Iranian chain restaurants. *European Journal of Scientific Research*, 60(1), 86–94.
- Vermunt, J. K. & Magidson, J. (2005a). Latent GOLD 24.0 user's guide. Belmont, MA: Statistical Innovations Inc.
- Vermunt, J. K. & Magidson, J. (2005b). Latent GOLD 4.5 (software). Belmont, MA: Statistical Innovations Inc.
- Vermunt, J. K. & Magidson, J. (2005c). Technical guide for Latent Gold 4.5. Basic and advanced. Belmont, MA: Statistical Innovations Inc.
- Vermunt, J. K., & Magidson, J. (2002). Latent class cluster analysis. In J. A. Hagenaars & A. L. McCutcheon (Eds.), *Applied latent class analysis* (pp. 89–106). Cambridge, UK: Cambridge University Press.
- Videon, T. M., & Manning, C. K. (2003). Influences on adolescent eating patterns. The importance of family meals. *Journal of Adolescent Health*, 32(5), 365–373.
- Willer, H. & Kilcher L. (2011). The world of organic agriculture. Statistics and emerging trends. Bonn, Germany, and FiBL, Frick, Switzerland: IFOAM.